What is claimed is:

1. A sub-micrometer-resolution optical coherence tomography device, comprising:

a light source emitting short wavelength light converted to a first beam with a broad wavelength spectrum by passage through phosphor;

an interferometer splitting the first beam into a second beam and a third beam; and

a reflective mirror reflecting the second beam to act as a reference beam;

wherein the third beam is reflected by the object to create a fourth beam interferometrically combined with the reference beam in the interferometer to provide interference fringes applied as an optical signal.

2. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 1, wherein the wavelength spectrum width of the light source is hundreds of nanometers.

3. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 1, wherein the first beam achieves near infrared wavelength.

4. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 1, wherein the light source is a light emitting diode.

5. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 4, wherein the first beam comprises white light.

6. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 4, wherein the wavelength spectrum of the light source is from 400nm to 700nm.

7. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 4, wherein the first beam is produced by a GaN light emitting diode and YAG phosphor.

8. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 4, wherein the first beam is produced by an ultraviolet light emitting diode and phosphor resulting in red, blue and green light.

9. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 1, wherein the light source is a blue LED.

10. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 1, wherein the light source is an ultraviolet LED.

11. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 1 further comprising a detector converting the optical signal received from the interferometer to an electronic signal.

12. The sub-micrometer-resolution optical coherence tomography device as claimed in claim 11, further comprising a signal processing unit processing electronic signal converted by the detector.